60 Years of societal engagement with nuclear energy – Learning from historical experience in 20 countries

Introduction

The History of Nuclear Energy and Society (HoNESt) project responds to the Call for the Horizon 2020 Euratom NFRP 12 – 2014 Work Program . The aim of the call is to fund research that focuses upon:

- Understanding of the development of nuclear energy in Europe
- Helping to improve communication and interaction with civil society.

It has two main elements:

1. A comparative and transnational historical analysis of nuclear developments and their relations with society, covering more than 20 countries over the past 60 years.
2. A social scientific analysis of *engagement* with nuclear energy – its underlying principles, rationales and futures

What we have *done* so far

- **20 short county reports** briefly describe the political, economic and social context in which nuclear developments and interaction with civil society have taken place.
- Social scientific analysis of the key drivers and underlying **principles of engagement** across 8 key case study countries in more detail..

We mapped across 4 dimensions

1. **Health & Environment**: Safety concerns and other control and management-related factors, perceptions of positive and/or negative effects on environmental issues including water, soil, air pollution and climate change
2. **Economics**: for example job creation, perceptions of industrial progress and new business opportunities, economic losses, security of energy supply, consumer economics (electricity bills), or cost of nuclear programme. Energy supply and national energy independence, the *Promoters* and *Regulators* that influence these factors. The economic context e.g. impact of low energy prices and open markets.
3. **Socio-cultural** - subjective perceptions of risk, the perception of threat to social and territorial identities, and to certain traditions, cultural values and lifestyles.
4. **Political-institutional**: The context of social relations in which these responses to risk take place matters: e.g. credibility, trust, perception of injustice/ inequality, and "good governance".

What we will do next:

- Translating, linking and bridging history and social science
- Deriving an understanding perceptions and mechanisms for societal engagement from the historical experience
- Aplpying social scientific theories of institutional analysis
- Develop a Theory of Change
- Performing a *backcasting* analysis
- Undergo a comprehensive process of dissemination and engagement

What we have *found* so far

Nuclear energy **does not follow a straight line**, nor **any established *rationality*** or a single pattern. Controversy about nuclear energy **doesn't show a uniform development across all case countries and time frames.** The reality is complex – there's no single lesson applicable to all cases.

However, two factors stand out:

- There is **no relationship** between the perception of benefits generated by an activity or technology and the perception of the risks it involves
- Public perception of the **controllability** of the technology is a key factor for social acceptance.

General trust in institutions matters, trust in Governmental institutions is strongly tied to trust in nuclear authorities

Traditions, cultural and social values and beliefs, strongly influence public perceptions about nuclear energy

Energy supply and national energy independence are key economic factors. Specifically the impact of low energy prices and open markets

Public participation - different stakeholders argue over different dimensions which **create monologues rather than dialogues.**

There is no **common denominator** as a basis for dialogue and for building mutual trust.

One-way, top-down communications are the most frequent ways of communicating across all case studies.

Bi-directional , multi-stakeholder communication tends to be limited to exceptional moments and/or to local (rather than national) territories.

Looking to the future – A theory of change

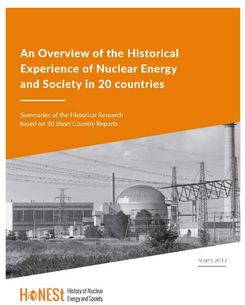
Illustrates how and why a change is expected to happen.

Maps out or "fills in" the "missing middle" between what an engagement program or change initiative does and how these lead to desired goals being achieved.

Backcasting

We will identify desired long-term engagement goals and then work backwards from these to identify all the conditions (outcomes) that must be in place (and how these related to one another causally) for the goals to occur. This is how a theory of change is constructed.

Backcasting is one way to achieve this. It is a planning method that which starts with defining a desirable future and then works backwards to identify policies and programs that will connect that specified future to the present. In this way we can plan different types of engagement programs that are sensitive to the historical context identified in the historical analysis stages of the project.



Further reading

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